

WHAT IS CLAIMED IS:

1. A co-processed composition comprising a modified starch and a flour
wherein the starch and flour are blended and co-processed to provide a
thickener which provides a combination of good opacity, process tolerance,
cold and hot temperature stability, emulsification and instant viscosity
properties in foods.
2. The co-processed composition of claim 1 wherein the co-processing is
selected from the group consisting of drum-drying, SIDA or EK processing.
3. The co-processed composition of claim 1 wherein the modified starch is a
stabilized starch.
4. The co-processed composition of claim 3 wherein the stabilized starch is
further crosslinked or thermally inhibited.
5. The co-processed composition of claim 3 wherein the stabilized starch is a
monofunctional substituted starch.
6. The co-processed composition of claim 3 wherein the stabilized starch is
derived from a waxy maize plant having at least one recessive *sugary-2*
allele.
7. The co-processed composition of claim 6 wherein the waxy maize plant is a
plant that is heterozygous for the *sugary-2* allele or a plant of a wxsu2
(homozygous) genotype, and translocations, inversions, mutants and
variations thereof.
8. The co-processed composition of claim 4 wherein the modified starch is a
hydroxyalkylated distarch phosphate, an acetylated distarch adipate.
9. The co-processed composition of claim 1 wherein the flour is a wheat flour
having a protein content of less than 16%.

10. The co-processed composition of claim 4 wherein the flour is a wheat flour having a protein content of less than 10%.
11. The co-processed composition of Claim 1 wherein the starch and the flour are present in a ratio of from about 72:28 to about 93:7 by weight, respectively.
- 5 12. The co-processed composition of Claim 11 wherein the starch and the flour are present in a ratio of from 80:20 to about 90:10 by weight, respectively.
13. The co-processed composition of claim 1 wherein the hot temperature process tolerance is characterized by an ability of a conventional Brown or
- 10 Tomato sauce containing the co-processed composition to have less than a 20% drop in viscosity from its peak viscosity over eight hours at about 71 °C.
14. The co-processed composition of claim 13 wherein the hot temperature process tolerance is characterized by the ability of a conventional Tomato
- 15 sauce containing the co-processed composition to have less than a 10% drop from its peak viscosity over eight hours at about 100 °C.
15. The co-processed composition of claim 1 wherein the cold temperature stability is characterized by the ability of a conventional Tomato sauce containing the co-processed composition to substantially return to its initial
- 20 state after one freeze thaw cycle.
16. The co-processed composition of claim 1 wherein the cold temperature stability is characterized by the ability of a conventional Tomato or Brown sauce containing the co-processed composition to substantially return to its initial state after two freeze thaw cycles.
- 25 17. The co-processed composition of claim 16 wherein the cold temperature stability is characterized by the ability of a conventional Tomato or Brown

sauce containing the co-processed composition to substantially return to its initial state after three freeze thaw cycles.

18. The co-processed composition of claim 17 wherein the cold temperature stability is characterized by the ability of a conventional Tomato or Brown
5 sauce containing the co-processed composition to substantially return to its initial state after four freeze thaw cycles.

19. The co-processed composition of claim 1 wherein the opacity of a solution containing 4% solids of the co-processed composition at 22 °C composition is at least two times greater as measured in Nephelomatic Turbidity Units
10 than the opacity of a solution containing a corresponding pregelatinized modified starch measured under the same conditions.

20. The co-processed composition of claim 19 wherein the opacity of a solution containing 4% solids of the co-processed composition at 22 °C composition is at least three times greater as measured in Nephelomatic Turbidity Units
15 than the opacity of a solution containing a corresponding modified starch measured under the same conditions.

21. The co-processed composition of claim 20 wherein the opacity of a solution containing 4% solids of the co-processed composition at 22 °C composition is at least four times greater as measured in Nephelomatic Turbidity Units
20 than the opacity of a solution containing a corresponding modified starch measured under the same conditions.

22. The co-processed composition of claim 1 wherein the emulsification property of the co-processed composition is characterized by the ability of a conventional Brown sauce containing the co-processed composition to
25 maintain its emulsification twenty four hours after cooking.

23. The co-processed composition of claim 1 having an instant viscosity at zero minutes and achieving about 80% of its peak viscosity in less than four minutes.
24. A co-processed composition according to claim 1 wherein the modified
5 starch is a dihydroxypropylated distarch phosphate waxy maize starch substituted to a degree of from about 5.7% to about 6.7% by weight of propylene oxide reagent used to stabilize the starch, and substituted from about 0.01% to about 0.025% by weight of phosphorus oxychloride reagent used to crosslink the starch and the flour is a wheat flour having a 10%
10 protein content, said starch and flour are present in a ratio of 85:15 (wt% starch:flour) co-processed via the SIDA process.
25. A process for using the composition of Claim 1 as a thickener in foods comprising the step of adding the composition to a food.
26. The process of Claim 25 wherein the food is selected from the group
15 consisting of sauces, gravies, dips, dressings, fillings, cheese sauce, fruit toppings, turnover fillings, marinades, soups, condiments, chowders, relishes, pate, batters, desserts, glazes, vinaigrettes, coatings, frozen entrees, dry mixes, and cream style vegetables.